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361 customers of the patron remain in their isolated dwellings the year round.

439 648 Every rubber collector deals steadily with the same patron, because the latter controls the section of forest land in which his clients work. The trader usually has no legal title, but receives rights of exploitation by paying [651] the state tax on the gross cash return from the land. The right of exploitation, perpetuated by the state tax, usually rests on a nebulous title, and, according to Wagley, it is [423] "control over the land, and not legal documents" which establishes ownership in the Amazon.[8] The patron grants permission to the rubber tapper to extract rubber from his lands and, in return, exerts a trade monopoly in which his client sells rubber to him and buys goods from him. [651] The patron profits from both sale and purchase and, since he passes the state tax on to the rubber collector, the latter receives but small return in terms of the prices prevailing in the urban markets. The client has freedom of movement only when he is not in debt to the patron, which rarely happens. If he owes money, he can transfer to another patron only if the new one settles the debt and transfers it to his own books. The rubber collector sometimes deals with the *regatões,* or itinerant merchants who ply the rivers, but these transactions are infrequent and in small amounts because the patron does not tolerate a substantial loss of commerce. The rubber collector who deals too often with the *regatão* might be denied credit by his regular patron or, less frequently, evicted from his avenue.

311 439 648 The economic power of the trader is especially strong on the upper Tapajós River because of a combination of geographic and economic factors. The lower Tapajós, from its mouth at Santarém to the first rapids 150 miles upstream, is economically diversified, and its rubber pro-

[8] Wagley, 1953, p. 92.

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duction is overshadowed in value by agricultural products, cattle, and hardwoods. Some rubber is still produced at the old Ford plantations, now government-owned, at Belterra and Fordlandia, but both installations are currently mainly used for experimental cattle breeding. Commerce is correspondingly brisker on the lower Tapajós. The inhabitants are not only visited regularly by several traders, but they have access to the market facilities of small towns and the city of Santarém.

The upper Tapajós and its two main tributaries, the São Manoel and Juruena rivers, are broken by a series of heavy rapids, some of which are impassable in the dry season. The first set of rapids, the Cachoeira de Maranhão, can be passed during the flood stage of the river only with considerable danger. For this reason, a five-mile-long road was built around them early in the century with the result that the trading company that controlled the road could force the local patrons to deal only with it, and thus effectively monopolize trade on the river. This is done by allowing only freight bought from the company and destined for freightage on the company launches to be transported on the road. Several attempts at competition by passing cargo through the dangerous rapids have ended in failure. Whatever company has controlled the two-way trade of rubber export and consumer-goods import has been able to fix consumer prices at whatever the market would bear. These prices have usually been too high to keep a stable, permanent working force, and there has been a chronic labor shortage on the Tapajós, even after the great rubber boom ended. The prices charged by the company for freight and goods are based on a cost index already made high by lack of the deep-water transportation available on the lower Tapajós. On the upper river, the rapids force the use of shallow-draft diesel launches

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tato (*Ipomoea batatas*), maize, beans, squash, pineapple, and pepper. At some time after the advent of the whites in the Western Hemisphere such plants as banana, rice, potato, and sugar cane were introduced. Cotton, although native to the New World, was not adopted and used by the Mundurucú until the nineteenth century. Similarly, although the potato is native in western South America it was not found aboriginally in the eastern part of the continent.

The agricultural land exploitable by each village is more than adequate, but not unlimited. Amazonian forest soil is generally of extremely poor quality. It is loose and friable and thus suitable to the simple digging sticks formerly used by the aborigines in planting, but it lacks the colloids essential to hold the minerals in the topsoil. The result is that the minerals are leached into the subsoil by the heavy annual rains. There is some variation in soil quality, however, even in this rather uniform environment. Much land is unusable in Mundurucú territory because it is periodically inundated or because it is sandy, grass-covered savannah. The tillable forest land is classified by the Mundurucú into the categories of black, red, and clay earth. The latter two are further subdivided if they contain a significant percentage of sand. Black earth is the best land and is usually the only kind in which they raise squash, melon, beans, and rice. These crops can be grown with uncertain prospects of success in red earth while maize can be raised in both. The tuber crops grow in all kinds of soil. Since black earth is not accessible to all villages, the list of Mundurucú crops is often drastically reduced in certain locations.

The land cannot be used for more than two plantings. On the second planting, in all types of soil, only bitter manioc is raised. Certain crops, such as pineapple, replant

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241 311 themselves and yield for several years in abandoned gardens. Other plants, such as timbó and some fruit trees are also productive long after the garden goes out of regular cultivation. The reason for planting a field only twice is obvious when one considers that bitter manioc matures in about eight months on the first planting and in more than a year on the second in the already "tired" soil. A third planting would yield little and, also, as the local Brazilians say, "the jungle takes over by that time." Fortunately, there is adequate virgin forest or old second-growth forest available to meet the needs of the population, and they simply clear new gardens. The usual system is for each man to clear land annually and thus have one garden in first planting and another in the second planting. But men often feel that they have adequate crops and let a year pass without clearing forest; this is especially common if a housemate has a new garden.

The rapid exhaustion of the soil and the plentifulness [423] forest land explains the absence of concepts of private or corporate property in land among the Mundurucú. When the best forest soils within a convenient range are exhausted, the village moves a short distance to the proximity [361] of fresh soil. But the Mundurucú build new villages every ten years [166] whether nearby garden land is scarce or not, and the present depleted population may shift within a one-mile radius over a forty- to fifty-year period. When conveniently situated forest is exhausted, they merely move out of this orbit to a new locale a few miles away, near which they remain for another long period. Villages probably moved somewhat longer distances in time past, when their populations exceeded two hundred people and pressure on the land was correspondingly greater.

423 The same causes that operate to make individual property in land meaningless apply on the family and village

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is usually used, because it is navigable to a point only five 361
hours from the village. From the Cabitutú River port of 487
Cabruá which consists of a house and clearing on the river bank, the path to the village winds through a belt of gallery forest of several miles depth. After crossing a few minor streams that flow into the Cabitutú, the path emerges into an open savannah and gently climbs for about three miles until the crest of the height of land between the Cabruá and Cabitutú rivers is reached. Cabruá is at this point surrounded by a belt of underbrush and low trees that have grown from cast-off seeds and have been fertilized by human waste.

Three hundred yards away at the base of the hill on 312
which the village is built is a small stream and a strip of bordering gallery forest only two hundred yards wide. The stream rises from springs a few miles away and its waters are clear, pure, and cool. People draw their water here, wash clothes, and bathe—the Mundurucú are personally [515]
very clean and perform their ablutions at least twice daily.

The village is in open country, but large expanses of 361
deep, virgin forest are nearby. Paths radiate outward in 487
all directions from the village, leading to the stream, the port, other villages, and to the forest. The forest itself is criss-crossed with trails used for hunting; others lead to the gardens. The latter are generally no more than 45 minutes walk from the village. This is considered a rather long [482]
trip, because the women must carry their harvest in burden baskets back to the village. Land is not unlimited in 311 ●
the environs of Cabruá; stretches of forest are subject to minor inundation in the rainy season, and large areas are sandy and horticulturally worthless savannah. The village, 361
then, must be moved at long intervals. Since contemporary [161]
Cabruá has only 67 inhabitants, there is no great pressure on land. Houses age and fall into disrepair rapidly, how-

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ever, and the village plaza and the surrounding underbrush become dense and the lair of snakes and scorpions. As a result of this rapid decay, a new village is built every ten years, but, since the people live in the old one while building the new, it is usually constructed nearby. The remains of four old villages, representing about forty years of occupation, can be discerned within a half mile of the present location of Cabruá. Gradual exhaustion of the more favored forest lands and the necessity of walking ever farther to the gardens eventually forces a move to the vicinity of fertile soil. Accordingly, the people of Cabruá decided during our stay to build a village on a site some two miles away, and they planned to start construction during the following rainy season.

The village of Cabruá and its households have suffered greatly from depopulation because of disease and emigration. Although many of its residents had not made definite plans, at the time of our departure the new village probably would have had no more than three households, for several people were considering migration to the Tropas and Cabitutú rivers. At its site in 1953, Cabruá had five dwelling houses. One was deserted, for the previous inhabitant had lost a son through an accident, and this was interpreted by the shamans to be the result of the family's inattention to their ritual duty to the sacred trumpets. The family left for another village before the trumpet spirits could exact further revenge.

The household of the chief included 17 people, and the largest house unit of the village had a population of 26. The other two houses of the village numbered 8 and 16 people. These groups constituted matrilocally-based extended families, although the continual flux and constant loss of population in recent times has disturbed this organization.

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men's house, and the newly formed Cauí, is 60. On the other hand, the average Cururú River community, excluding the mission and Indian-post settlements, numbers less than 40 people. The Cururú settlements have few of the cohesive aspects of the savannah villages, but are afflicted with the cultural inheritance of many of their divisive tendencies. This can be illustrated by briefly presenting the community organization in one Cururú village.

Its eleven houses and 90 people make Missão Velha the largest village on the Cururú River. The village suffers from the same disadvantages that made it necessary to move the mission from the area. It is set back about a half mile north of the river bank because the river here is bordered by a stretch of savannah that is inundated annually. There is a clear stream about ten minutes walk to the east, but the annual flooding makes it inaccessible in the rainy season and water must be taken from the intervening flooded forest. To the north, behind the village, is a region of low savannah interspersed with stretches of forest. There is a limited amount of land suitable for horticulture, and, after seventeen years of occupation of the village, nearby land is already scarce. An additional disadvantage of Missão Velha is the presence of the usual quota of insects that infest the Cururú, which make the relatively insect-free savannah villages more agreeable.

Missão Velha, like most of the other riverine villages, grew up without planning of internal arrangement or location except for proximity to rubber avenues. All but one of its eleven houses have wattle-and-daub walls in the Brazilian fashion. The exception has walls made of vertical wooden laths, also a Brazilian mode of building. One house has the high, steep roof and rounded ends of the aboriginal dwelling, although its walls are of mud. The cook sheds adjoining the rear entrance or the side of each house are a distinctively Brazilian trait.

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moving out of village life altogether to live in the relative isolation of their rubber avenues. Others have left the Cururú and are found near its mouth on the Tapajós. Not all fission arises from factional splits such as that described. Individual persons and nuclear families are always on the move from one village to another or to permanent residence in the rubber avenue because of unresolved interpersonal conflicts.

These disputes are frequently over women, who are scarce on the Cururú. It has been said that the savannah villages suffer from a shortage of men because of the slow but continuous emigration of the more mobile young males, which results in hostility and competition between the younger females. The opposite situation prevails on the Cururú. There, the young campineiro men who have drifted to the shores of the stream have upset the male-female ratio. The migration of young men from the savannahs to the Cururú has slowed up so much in recent years that the ratio between the sexes may readjust itself. At present, however, the men's excursions generally lead to the married women, and such liaisons cannot be long concealed in small villages. Extramarital sex relations are common in the savannahs also, but there are enough unmarried girls to make female adultery less frequent and competition over women less intense. Correspondingly, there are fewer cases of hostility between men in the savannahs caused by sex.

In addition to the effects of disputes over sorcery and sex, economic causes, such as the growing scarcity of land near the larger villages, are also responsible for social fission. When one's village house gets old it is often more convenient to take up permanent residence near the rubber avenue, especially if one produces sufficient rubber to buy the copper farinha-toasting pan.